

ABSTRACT

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A stroking speed adjustment for a computer controlled shaping machine for forming at least one tooth on a workpiece with a cutting tool, the cutting tool being reciprocated to define a tool stroking motion wherein the tool stroking comprises a cutting stroke and a return stroke, and wherein the return stroke is carried out at a speed faster than the speed of the cutting stroke. The machine comprises a rotatable element, such as a drive shaft, associated with the reciprocation of the cutting tool. The rotatable element includes at least one detectable surface positioned thereabout and a position sensor is placed adjacent said shaft and detectable surface. During rotation of the element, the passing of the leading edge of the detectable surface proximate the position sensor at the beginning of the return stroke results in a signal being sent to the computer to effect an increase in the speed of the return stroke relative to the speed of the cutting stroke, and wherein passing of the trailing edge of the detectable surface proximate the position sensor at the beginning of the cutting stroke results in a signal being sent to the computer to effect a return to the speed of the cutting stroke.

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